“Begin each day by asking a question. Let the answer lead you to another question and you will discover that learning and knowledge are an infinite playground.”
— Dr. Patricia Bath
The goal of the new Kellogg middle school is to address and serve PPS’s vision to: place students at the center, promote honesty and integrity, breed creativity and innovation, and foster respect for all students.

The new Kellogg Middle School is a learning facility realizing the future of middle school teaching and learning for Portland Public Schools (PPS). The former Kellogg Middle School officially closed in 2006 when enrollment dropped and the District moved to a K-8 model. Ten years later, the neighborhood has grown and the District is in the process of switching back to the middle school model. The design team, conducted a renovation site assessment of the aging facility in 2015 to determine necessary improvements to re-open the school. After analysis of the existing conditions, it was clear that the educational requirements for an active learning school could not be met within the limitations of the existing 100 year old structure and the project scope shifted to replacing the existing school.

The new middle school is part of PPS’ plan to return to an elementary-to-middle school model district-wide. The new framework converts various K-8 schools to K-5 schools to include 5 middle schools. Recognizing that middle schoolers have different needs than high school and elementary students, this new framework focuses on developing students need to provide curriculum specific to middle school.
The completion of the school exceeded expectations. Students, staff and community members will benefit from all the building has to offer when they return in the fall. The planning process united the local community to determine goals and values and implement them in the project design. The new building uses this input and student-centered design to create opportunities for learning and exploration around every corner. The high level of sustainability design promotes a healthy learning environment with low energy cost and maintenance requirements while achieving high performance compared to all other District buildings.

Project goals and vision were build on input from stakeholders. Stakeholder engagement includes a 30 person Design Advisory Group (DAG) in addition to PPS focus groups, administration and neighborhood associations.
The project laid out ambitious goals to incorporate into the scope of work. The scope was completed on time and under budget through a collaborative process with all stakeholders.

The overall project goal was to provide the students & community with a new learning space.

This was accomplished through the following process:

• Design and construct a new three-story, approximately 100,000 SF grade 6 through 8 middle school.
• Include input from community and partner organization to develop spaces with covered play area, play field, parking lot, bus drop-off loop and emergency vehicle access road.
• Place sustainability at the forefront of all decisions, achieving to a sustainability target of LEED® Gold and Net-Zero Ready.

The Team employed sustainability-driven cost saving strategies to keep the project under budget. Funding for the work was approved from a bond passed by the community. The project went through a competitive bidding process to create a fair selection process, with demolition being bid separately and early this helped achieve lower bids and eliminate the unknowns in the construction phase that come with an existing site. The bids for the construction phase were under budget due to this separation and the project achieved minimal amounts of change orders throughout the construction process helped to avoid costly revisions to design, and ultimately saving the school district over one million dollars.
Acoustic and mechanical design provide a safe and learning-focused environment.

Gymnasium and auditorium space design uses passive temperature control systems for low-maintenance comfort as well as a space for emergency occupancy.

Administration space and secure entry/exit into the Commons provides maximum visibility for staff.

The Commons area provides cafeteria and community space while connecting North and South areas to serve as the “heart” of the school.

Community teaching space connects students with local resources and learning opportunities.

CTE and maker spaces provide practical skills and cutting edge resources for diverse learning opportunities.

Classrooms provide natural daylighting and pop-out windows to allow for comfort and self regulation.
Community

Development of Kellogg Middle School was intensely collaborative, including input from a wide host of stakeholders and community members while fortifying PPS' vision to place students at the center. Early in the design process, the design team collaborated with the Office of Teaching and Learning and a community-based Design Advisory Board to develop Kellogg’s guiding principles of design. The results aligned schematic design with guiding principles for the new middle school, and a commitment to these values throughout the design process.
The new school acts as a focal point to bring together residents. The design promotes community engagement at multiple levels and provides a sense of ownership. A dedicated community center space is a consistent area to gather for neighborhood events. The center contains a dedicated ADA restroom, pantry/storage room, meeting room, and three separate partner offices designed with and for PPS partners. The pantry is uniquely placed to provide a means for students in need to access food and clothing without feeling uncomfortable or singled out. This space serves learners of all ages, facilitating after-hours adult learning classes as needed to meet demand in the community.

School partnerships with the community are essential to helping children reach their maximum potential. The community collaboration with Kellogg complements and reinforces values, culture, and learning opportunities for students. At Kellogg all teachers, staff, parents, businesses, nonprofits, and service clubs work together to make a difference in the lives of the students. The community center will be utilized by PPS partners such as the PTA, SUN (Schools Uniting Neighborhoods), and local neighborhood associations.

Through these partnerships the school provides a safe place for community partners to conduct after-hours meetings and provide services to the community and students.
Stakeholders

Many individuals and groups were part of the design & construction effort, and even more will be part of the this school going forward. Portland Public Schools staff from the Office of Teaching and Learning (OTL), Teachers On Special Assignment (TOSA), community members such as the Design Advisory Group (DAG), and the local neighborhood associations aided in determining a strategic approach to discovering the values by which the new school was built.

Our DAG was made up of middle school parents, neighborhood parents, neighborhood associations, business owners, school administrators, potential community partners, local government employees, and teachers, in addition to a school board representative.

The Teacher on Special Assignment (TOSA) provides support for implementation of the district’s educational mission. At Kellogg, the team had the benefit of input from many TOSA individuals, including representatives from performing arts, math, social studies, library, STEAM, ELA, P.E. and SPED.

Many businesses line the same street as the school, providing services for food, hospitality, automotive care, shopping, and many more. In addition to nearby businesses, the school property also shares borders with many residential lots. Adjacent neighbors, both home and business owners, provided input throughout the design process at the many community meetings held throughout the design process.
Challenges

A unique aspect the team had to overcome early on was establishing a community for the school where none had existed since the former school closed a decade ago. The neighborhoods that would eventually become a part of the school were also not defined at this stage while PPS was working through the District wide boundary changes. An expanded information gathering process was required, and led to a diverse collection of input by the community well beyond what would eventually be the school’s catchment area.

When the project evolved from a major renovation to new build construction, an opportunity arose to set more ambitious goals for the school, investing in innovative long-term solutions for the building. Addressing cost concerns was essential to achieving a higher level of sustainability for the building, as the school district did not have well defined or tested sustainability parameters in place. Educating District leaders and maintenance personnel was key to incorporating more sustainable systems. This was done by using research & data of existing facilities as well as speaking to their facility staff to understand the long term cost savings these systems provide.

The form the building took was partially determined by the tight site constraints. The southern portion of the property bordering the state highway is zoned commercial, and north is residential. The school was located with the three story portion next to the state highway with the building’s scale gradually stepping down as it enters into the residential neighborhood. The play fields were then located at the far northern portion of the site away from the safety concerns of the highway.

A dead-end residential road was opened up on the east side of the property to allow emergency vehicles to enter the site. The paved fire turn-around on site doubles as an outdoor learning environment, play area and commons space.

Reclaimed gym flooring was repurposed as clouds in the extended learning spaces.
**Assets**

Sharing borders with thriving businesses who can participate in guest teaching and volunteer opportunities within the classroom is a great asset to the project. Businesses may also become the destination for field trips to get students first-hand experience for interested careers. This was a unique opportunity to turn an otherwise unwanted site condition into an advantage for the school.

**Value of Process and Project**

Forming and interacting with the diverse set of individuals that make up the Design Advisory Board provided enormous value to the project. The workshops, charrettes, forums, and other discussions that were part of the community involvement process defined the priorities of the community and guided design. The engagement process let everyone have a voice through multiple meetings to come to a consensus on priorities. Meeting these priorities means the building is accepted and welcomed into the community.
Guiding Principles
These guiding principles of design closely align with the Portland Public Schools’ vision and values that places students at the center. In collaboration with the Office of Teaching and Learning and a community-based Design Advisory Board, the following guiding principles were at the center of the school’s design.

Learning Environments
All learning environments will be accessible to all students, teachers, and visitors. The school will encourage diversity in its population and learning environments. The school will encourage equity for everyone, provide an experiential atmosphere, use the latest technology available, promote physical fitness, and focus on student performance.

Identity
The identity of the school will serve the community, be inclusive, promote equality, represent sustainability, be future minded, and be inviting to everyone.

Flexibility
The school will have flexible and adaptable spaces, provide spaces for community use, create spaces for after school programs, create neighborhood partnerships, will be ready for future growth, it will focus on student security, provide extended learning spaces, and have 21st century learning environments.

Environment & Health
The school will be energy efficient, provide natural lighting, provide natural ventilation, promote outdoor learning, be high performing, and will be resilient.
**Educational Vision & Goals**

The goal of the new middle school is to address and serve the PPS's vision that places students at the center, promotes honesty and integrity, breeds creativity and innovation, and fosters respect for all students.

**Place students at the center**
Understand the unique needs of each individual and provide an environment that best supports them.

**Promote honesty and integrity**
Create a safe atmosphere where students feel comfortable sharing. A sense of place and ownership in the school.

**Breed creativity and innovation**
Provide spaces for exploring interests and opportunities to discover new ideas or develop old ones.

**Foster respect for all students**
Safe, shared spaces that promote an environment for open discussion.

**Sustainability & Energy**
Reduce the harmful effect the building may have on environment and promote healthier indoor living.
Environment Supporting the Curriculum

Biophilic design is used as a defining factor in the new middle school. It has been proven that connection with nature increases productivity and aids in health and development, particularly in children. The new middle school displays nature with the inclusion and focus on existing natural features such as views to the outdoors and access to the outside.

The new middle school is designed to be sustainable with low energy not only for the benefit this does for the school but for the opportunity for teaching, weaving building systems into opportunities for student education and engagement as well as an example for future schools. The schools sustainable curriculum is supported with the concept of the building-as-curriculum, the structure itself and the sustainable aspects are highlighted throughout the school. Over 130 educational signs from 11 categories throughout the school and site provide information about the school, giving students educational fun-facts about the sustainability of site and building systems to encourage discovery and curiosity-driven learning opportunities. The educational plaques are strategically located throughout the building to highlight a design feature within the sign’s proximity. These features are also available for use in tandem with class curriculum via the school’s user guide. This user guide is a document specifically created for educators that describes the building, how it is constructed and the systems that make it function in ways the students can understand and relate too.
Variety of Learning & Teaching Styles

Kellogg Middle School was designed to support transitional needs for middle school students. Inclusive design required multiple means for:

- Representation to give learners various ways of acquiring information and knowledge.
- Expression providing alternatives for demonstrating knowledge.
- Engagement to tap into learners’ interests, offer appropriate challenges, and increase motivation.

Middle school is a time of incredible growth for adolescent development in identity and independence. This transition is a time of accelerated cognitive, physical, social, and emotional growth, prompting design to consider these changes while keeping students and teachers engaged.

The concept of special education mainly focuses on the design of an educational structure that has the potential to overpower the disadvantages of any disability along with helping the children to get quality education. The intensive skills room support students with learning needs due to cognitive delays that impact their participation in the general curriculum. These programs provide specially designed instruction, as appropriate, in the areas of functional and basic academic skills, social skills, communication skills, and for some students, basic life routines. Related services, including assistive technology and nursing support, are provided consistent with each student’s individualized education program (IEP).
The Learning Centers is the service delivery model offered within charter schools, and Multiple Pathway programs supported by Portland Public Schools. This service delivery model option provides students additional support provided through Specially Designed Instruction that is offered by a certified teacher through a push-in/co-teaching model and/or a removal model. The purpose of the learning center is to enable students to grow to their fullest potential by providing an education designed to fit their unique and special needs.

The quiet room is a dedicated area that provides a calming, quiet, distraction-free zone. It can be a place for students to get caught up on work, take a test, draw, calm down, manage emotions, or just to be alone. The room is a designated space that children can retreat to when they feel overwhelmed and overloaded by the sensory input from the immediate environment. It gives them time and space to calm their sensory systems and take control of their emotions again.

Hands on learners will benefit from the strategically placed educational signage, where they are able to see and touch the subject discussed on the sign first hand. For a deeper understanding and exploration of certain topics, technology inclined students can tap into the buildings real-time energy information dashboard.
Adaptability

Kellogg Middle School provides flexible space embracing the developmental needs of middle school students via innovative pop-out spaces across the school. Every teaching space provides a pop-out window for students that may struggle in large groups, but still wish to participate. The safety of these pop outs allows the option for self-regulation when anxiety rises; students can participate from a distance, developing social skills without becoming overwhelmed.

Extended learning spaces of various sizes are scattered throughout the building. At times these spaces may contain furniture arranged to provide direct teacher to student interaction, or spread out in groups for more collaborative discussion. Other activities that may take place in these spaces include art gallery displays, theater productions, or social events.
The Gymnasium was designed to support many different uses. For general everyday use the bleacher can be rolled in to maximize the use of the court and physical education activity. A stage opens out into the gymnasium that can be used in conjunction with the bleachers to facilitate larger gatherings. For large theater performances, a bifold door can be raised at the stage to expand the space into the room beyond.

Classrooms such as the Art & ESTEAM offer opportunities to adapt and expand to accommodate different learning environments. In the Art room, ceiling hung curtains can be used to divide the space into separate learning areas with different activities occurring in each. Bifolding doors open the room to the outdoor learning garden, where classes can take advantage of additional learning tools such as a solar tracker and writable wall surfaces.
Environment
The Pacific Northwest and Portland, OR, is a region known for its beautiful natural features, its leadership in environmental design, and its welcoming open-arms approach to everyone that lives here. The new middle school aims to be the embodiment of these qualities and finds its sense of belonging within the South-Tabor/Foster-Powell Portland neighborhood. A mostly residential area, the South Tabor and Foster-Powell neighborhood is home to many established Portland Public Schools. The neighborhood is also home to several parks, gardens, farmer’s market, shops, restaurants, and local businesses. One of the streets bordering the school, NE Powell Blvd, U.S. highway-26, runs across the neighborhood and stretches from the Oregon coast to the heart of Nebraska.
Community Context

The form of the building captures & projects the underlying transition of the site and surrounding properties from commercial to residential. The southern classroom wings of the building run parallel to the main thruway of a busy commercial street, and extends upwards three stories. This form gives the school a larger facade to fit in with the adjacent businesses. As the form of the building continues northward, the height and width of the building scales down to better fit into the residential neighborhoods along the northern boundaries of the site. The open play areas, fields and walking track are situated at the northernmost point on site, adjacent to the residential neighborhoods that will benefit from these spaces.

The potential for neighborhood integration in the school depends on possibilities for social encounter and exchange among the neighbors. In this sense, the use of public space, and particularly the student-neighborhood plaza located on the corner of NE Powell and NE 69th, is an effective instrument for social cohesion. The plaza is designed to provide a gathering place for students and neighbors alike. The plaza offers permanent concrete seating with inscribed inspirational phrases on the pavement. The inspirational phrases were provided by the district through a student-teacher survey. A 14 foot tall freestanding obelisk in the middle of the plaza serves as a marker and monument for the school and community.
An environment that inspires and motivates

Inspiration can come from many places in and around the new building. A prominent feature of the design are the educational signs throughout the building and site. Using the diagrams and descriptions on the signs, students can visualize and explore the building to a much greater degree, peeling back the layers of the building to expose the systems underneath. Topics for the signs cover all aspects of the building design, such as sustainability, universal accessibility, historic preservation, and much more. Finding signs around the building and site will provide an opportunity for students to have fun while making the building elements more relatable.

The southern wall of the commons area was constructed with writable wall paint. Labeled the “Gratitude & Awe” wall, students are encouraged to write down anything they find inspiring or motivating. The wall also displays the definition of gratitude and awe, an always present reminder of what it means to embrace those feelings.
The physical properties of the natural environment are reflected in the building stories. Each floor is associated with thematic elements such as earth’s core, earth’s surface and earth’s atmosphere, land masses such as plains to plateaus to mountains, or animals such as sea creatures to land animals to birds. Utilizing themes such as these gives students an opportunity to learn at every corner, as well as tangible elements that inspire realistic comparisons.

The design promotes outdoor exploration by creating and sheltering two learning courtyards. These courtyards are only accessible from the school, creating a safe and comfortable learning atmosphere. The courtyards include active and passive learning strategies to inspire and spark student curiosity; whether they are utilized during class time or during other school activities.

The Student Union Plaza is designed to provide multiple layers of learning for all students in all subjects. Fibonacci patterns on the pavement, inspirational quotes inscribed in a circular concentric band, a artistic geometrical drain cover, and educational signage throughout the Plaza connects this outdoor feature as curriculum and functional space.
Educational Vision & Goals

PLACE STUDENTS AT THE CENTER

• The **Student Union Plaza** is designed to provide multiple layers of learning for all students in all subjects:
  
  **Fibonacci patterns on the pavement**, **inspirational quotes inscribed in a circular concentric band**, and **educational signage throughout the Plaza integrate curriculum and functional space**

• **Classroom pop-out windows** provide space for individual research, reflection, and metacognition. The space fosters the individual production time needed before and after interactive collaboration, self-reflection, and self-regulation.

• **Universal Design** and **ADA Access** are integrated into each area of the school.

PROMOTE HONESTY AND INTEGRITY

Kellogg Middle School was designed to support transitional needs for middle school students. Inclusive design provides multiple means for:

**Representation to give learners various ways of acquiring information and knowledge**

**Expression providing alternatives for demonstrating knowledge**

**Engagement to tap into learners’ interests, offer appropriate challenges, and increase motivation**
BREED CREATIVITY AND INNOVATION
Opportunities for interaction with and learning from the built environment to maximize creativity, health, and opportunity for students through “building-as-curriculum” elements:

**Wayfinding Signage** correlating the layers of the earth and atmosphere to regions of the school

**Over 200 educational signs** detailing sustainability, re-purposed materials, environmental functions, and historic context engage inquiry-based dialogue while connecting a sense of place and history with the imagination of students

**Energy Education Dashboard** displaying the school’s resource use in real-time, highlighting what features contribute to conserving those resources.

FOSTER RESPECT FOR ALL STUDENTS.
Kellogg Middle School’s design aligns to PPS’ core belief that high quality, free public education has the power to create the critical thinkers and advocates to positively change our city, state, and nation. This creation relies on leadership, students, district staff, community shareholders, and families to cultivate the diversity and resulting dialogues required to create equity in education. The planning, engagement, and design processes were informed by this goal at each step to create a cutting-edge, inclusive, and safe learning environment enabling students to become life long learners while serving their community in harmony with the natural environment.
Kellogg Middle School presents an unprecedented level of energy efficiency when compared to existing Portland Public Schools. Meeting an energy consumption performance standard of 70% below the country average/median for the educational building type, the school will also be Net Zero energy by 2030, meaning the school will create as much energy as it requires to operate annually. Once all renewable energy sources are fully operational, the school is estimated to reach an EUI of 19.6 (four times the national public school average EUI of 83). The building is targeting LEED® Gold certification.
Achieving School District Goals

This project was kicked off due to a successful community bond measure proposed by the school district in 2017. The community saw a need for a modernization of the current facilities and approved $790 million to address this issue at Kellogg and other locations. The competitive bid process produced a winning bid that met the project budget, and minimal revisions through construction kept the cost down. Kellogg Middle School meets or exceeds budget and energy efficiency goals—a critical aspect of delivery for PPS, which must operate construction projects under strict and transparent budgetary constraints.

The school district comes away from this project with a newly defined set of sustainability standards. Research for this project shows the district and the community can save money in the long term by utilizing more sustainable construction options than past projects. This opens the doors for future district projects to incorporate these good sustainable practices, providing better buildings without a large amount of extra cost.

By incorporating accessibility features throughout school buildings, administrators can ensure that all students and staff have equal access. By adding elements such as Braille signage, multi-language labeling, and handicap restroom stalls, schools can eliminate barriers that would otherwise prevent individuals from navigating the building or using the facilities.
Meeting Community Expectations

It was clear from the input during meeting with the community and school district that it was vital to have dedicated spaces and amenities available to the students that need them most. The intensive skills room is located prominently by the main entry plaza and within the classroom wing for ease of access by medically fragile students while still having them integrated into student body. This was important for both the teachers working with the students and for the students development and interaction with their peers.

Demand in the community to feel involved and have a relationship with the new school is met by incorporating a permanent community room. The community room is a platform and focal point for community gathering, discussion & engagement. It also symbolizes an entryway for adults to further their educational goals by participating in after hours learning opportunities in the rooms adjacent to the community room.

The identity of the school serves the community by promoting inclusivity, equality, sustainability, and representation with a mind toward the future. Younger community members are able to get the services they need at the school in a manner that maintains equality with their peers.
Unforeseen Benefits

The acoustic treatment in the gymnasium was improved to accommodate its multi-use performance, assembly & physical education space. Physical education that takes place in the gymnasium often creates an enormous amount of unwanted noise. This extra noise makes it difficult for students to hear and intake information, especially students who are sensitive and become overwhelmed in noisy environments. The extra acoustic treatments in this space will reduce noise and potentially improve student learning in the space.

Locating the community room on the ground floor near the busy commercial street has a positive impact on building security. By utilizing the community spaces for after hours activity, it keeps more eyes on the building from within and surrounding neighborhood. Having the building operating after normal school hours keeps unwanted trespassing to a minimum.
Portland Public Schools charged OHPD with re-envisioning its 2015 middle school educational specifications to meet the current needs of the District for the design of Kellogg Middle School. The District’s middle school planning principles of Zoned - Whole, Center, Learning Space Organization, Community of Professionals, Enough Space, Flexible/Agile, Variety, Transparency, A School Should, Natural Light, and Acoustics were used as a lens to evaluate space planning decisions in the new school. These evaluations were made through collaboration with District and community stakeholders.

The result of this process was the elimination of underutilized rooms and square footage to increase space for programming needs, increase capacity, and realize planning principles. The District’s decision to have (1) technology device for every student eliminated the dedicated computer classroom to gain flexible space for extended learning. Additional space was identified by combining the auditorium with the gymnasium to result in a dedicated music room with instrument storage and practice space, while the stage was equipped with an retractable acoustical wall to function as a dance space. The design of these spaces is a result of the District prioritizing performing arts after the 2015 educational specifications. The outcome of the process is a new educational specification standard for future middle school space planning.
Educational Visioning

Setting the bar higher for sustainable design in schools
Kellogg will be the first of its kind in the PPS district. While the design brought in the most efficient systems the budget allowed, the real goal is to expose all the parts and pieces at work, inspiring students and visitors to be more conscious of the operational aspect of the building.

Community involvement
A large part of the schools success comes from the community it is in. Community input early in design set the stage for robust community outreach. Utilizing the community room and after hours adult learning will maintain this building as a focal point of the community.

Provide learners the best possible environments
The new school is able to accommodate a multitude of different individuals. The building provides a wide range of environments that support different styles of learning and interactions. Spaces inside the building are dynamic, and can be reconfigured in the future to support new learning & teaching styles.
"Change will not come if we wait for some other person or some other time. We are the one’s we’ve been waiting for. We are the change that we seek."
—President Barack Obama